

State of Utah

DEPARTMENT OF NATURAL RESOURCES

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Executive Director

Division of Oil, Gas and Mining

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May 19, 2010

Rick Havenstrite Desert Hawk Gold Corporation 8921 North Indian Trail Road, Suite 288 Spokane, Washington 99208

Subject: Third Review of Notice of Intention to Commence Large Mining Operations, Desert Hawk

Gold Corp., Cactus Mill Mine, M/045/0049, Tooele County, Utah

Dear Mr. Havenstrite:

The Division has completed a review of your Notice of Intention to Commence Large Mining Operations for the Cactus Mill Mine, which was received April 14, 2010. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages of the original mining notice using redline and strikeout text. After the notice is determined technically complete and we are prepared to issue final approval, we will ask that you send us two clean copies of the complete and corrected plan. Upon final approval of the permit, one copy stamped "approved" will be returned for your records.

The Division will suspend further review of the Notice of Intention until your response to this letter is received. If you have any questions in this regard please contact me at 801-538-5261 or Leslie Heppler at 801-538-5257. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker

Minerals Program Manager

PBB:lah:pb Attachment: Review

cc: <u>Larry Garahana@BLM.gov</u> <u>Stephen_Allen@BLM.gov</u>

Stephen_Allen@BLM.gov Wstokes@utah.gov wwcampbell@utah.gov

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THIRD REVIEW OF NOTICEOF INTENTION TO COMMENCE LARGE MINING OPERATIONS

Desert Hawk Gold Corporation Cactus Mill M/045/0049 May 19, 2010

General Comments:

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
1	General	Submittal should be formatted to easily incorporate additional revisions and amendments.	lah	
2	General	Based on the responses received, the Division might have additional comments. Surety is to be upgraded. (At the time of submission, April 14, 2010, no rinsing was included; a new calculation was added on April 26, 2010). Additional upgrades might still be needed.	lah	
3	General	Additional comments from the Division might be generated in the final review based on receiving the completed final NOI. A cover to cover review will need to be done on the final plan before it is stamped approved.	lah	
4	Page 21	Final document is to be signed.	lah	Med 8

R647-4-105 - Maps, Drawings & Photographs

General Map Comments

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
5	All cross sections	Please label cross sections with maximum and minimum slope angles. Otherwise, the Division must assume a worst-case scenario for reclamation grading and the bond calculation.	lah	

105.1 - Topographic base map, boundaries, pre-act disturbance

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
6	Figures 1 and 6 and Section 106.3	According to Section 106.3, the area of actual mining at the clay borrow pit is 0.1 acres and that the access and haul roads to this pit are 0.9 acres, but Figure 6 indicates the clay/borrow pit is 0.8 acres, the soil stockpile is 0.1 acres, and the access road is 0.1 acres. Please make appropriate corrections. Please include acreage figures in the legend of Figure 1.	lah & pbb	

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Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
7	Figure 4	Please tie the chart on this figure to the surety sheet (facilities labeled A through J).	lah	
8	Page 5	Please modify the text the first paragraph under Section (a) to state those facilities that are actually at the site and to be consistent with the statement about facilities on page 2.	lah	
9	Figure 5	Please list acres disturbed for each item in the legend as done on Figure 6.	Lah	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
10	Page 5, Section (c)	The plan indicates there are no test borings or core holes. Please clarify this section by including mention of the monitoring wells and referencing that they are on Figure 5.	lah	
11	Figure 5D	Show the location of the cross section on one of the plan view figures.	lah	
12	Figure 5D	Should have some sort of vertical and horizontal scale, could be max and min.	lah	
13	Figure 6	As drawn, this figure shows no access from the clay pit to the soil stockpile. The Division suggests moving the soil stockpile so it is adjacent to the pit area.	lah	
14	Figure 6	Show the locations of B-B' and A-A' from figure 6B and 6C.	lah	
15	Figure 6B	It appears from this figure that fill material will be added to the clay pit for reclamation. This is not reflected in the surety calculation. Please clarify if this is not what is intended.	lah	
16	Figures 5B, C, & D	Please show the locations of these cross sections on one of the maps, such as Figure 5. The Division understands the cross sections are schematics but needs to know the locations in relation to other facilities. Is the copper precipitate tank on Figure 5D the same as the concentrate dryer on Figure 5? Please use consistent labeling.	lah	
17	Omission	Please include a reclamation treatments map for the clay borrow area.	lah	
18	Figure 7	Show locations of cross sections on Figure 7. Include one long section and three cross sections	lah	
19	Figure 8	The geology map is missing a north arrow and a scale.	lah	

R647-4-106 - Operation Plan

106.2 - Type of operations conducted, mining method, processing etc.

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
20	Page 6 Para 1	Please include the mine ID number of the Yellow Hammer Mine permit to make it clear the Yellow Hammer mine is not part of this operation.	lah	
21	Page 6 Para 2	As written the rinse and neutralization cycle is 3 years. The bond calculation sheet does not indicate a 3-year cost.	lah	
22	Page 6 Para 3	What is to be done to keep the liner in leak free condition in areas between the pad and the pond, i.e. what will be done with heavy equipment traveling in the area?	lah	
23	Page 7 Para 9	Please address comment 7 from the BLM's April 30, 2010, letter. The plan says, "The surety will reflect the cost of removal of this equipment should it become necessary " (emphasis added). Permit is to be such that removal of all equipment and supplies on site will be included in the surety (tanks, generators, pumps, chemicals, water lines, pipelines, etc). This was also requested by BLM comment 5 from their April 30, 2010, letter	lah whw	

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Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
24	Omission	Please address comment 8 from the BLM's April 30, 2010, letter and show the locations of all water storage facilities. –Please also address comment 9 which is to include a table of all chemicals, reagents and hazardous material, include handling, storage plans and spill contingency plans.	lah	

106.3 - Estimated acreages disturbed, reclaimed, annually

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
25	Page 8	The Division recommends that acreage figures be included on Figure 1.	lah	

106.4 - Nature of materials mined, waste and estimated tonnages

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
26	Omission	The plan does not contain a discussion about a leak detection system.	lah	
27	Page 8	The plan contains a statement that 100,000 tons per year of oxidized granodiorite rock will be placed on the pad each year. Is any sulfide ore anticipated? If so, the plan needs to contain procedures for handling this material and eliminating or controlling environmental hazards.	lah	
28	Page 8	On page 8 rinsing is listed as 6 months, on page 6 Rinsing and Neutralize is listed as 3 years, surety calculation has 200 days. Please be consistent throughout the document. Nothing is mentioned in the permit if ore is to be stacked or dumped, percent recovery being targeted, and only a maximum height of pad is given. Bond calculations are done on the worst case scenario. It is in the operators best interest to provide details.	lah	
29	Page 8	Please clarify the information in the table at the bottom of page 8. This table indicates ore will be mined at the Cactus Mill and that there will be tailings and reject materials.	lah	

106.6 - Plan for protecting & re-depositing soils

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
30	Page 8	The NOI indicates that there is not a reasonable source for bio-solids or composted manure for soil amendments and that you plan to use commercial fertilizers to amend soils. A review of the soils data indicates that for the clay pit area, organic matter is very low. Please consider amending with the soil with 2 ton/acre of alfalfa hay to improve the organic matter content. It is unlikely commercial fertilizers will provide much, if any, benefit to re-establishing vegetation.	LK	

106.7 - Existing vegetation - species and amount

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
31	Page 10	The NOI states that a vegetation survey will be done this spring/summer for both the mill and clay sites. Please submit this report by August 1, 2010.	LK	

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106.8 - Depth to groundwater, extent of overburden, geology

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
32	Omission	Include the geology of the clay pit, and short description in the text.	lah	

R647-4-107- Operation Practices

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
33	Page 13 Para 3	Commit in text to storm event size listed in SWPPP.	lah	
34	Page 14 Para 1	There is older equipment and debris that has been moved to the fence perimeter and the equipment needs to be included in the surety calculation.	lah	
35	Page 14 Para 2	The Division recommends that you do interim seeding of disturbed areas to reduce weed infestations and reduce the bank of weed seeds in the soil.	lah	
36	Omission	Address BLM comment 1) from their April 30, 2010, letter. The location of crusher on Figure 9 is not clear, as the drawing is a schematic.	lah	
37	Omission	Address BLM comment 4) from their April 30, 2010, letter. Include an operation schedule.	lah	

R647-4-108 - Hole Plugging Requirements

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
38	Page 14	Reclamation of the monitoring holes is not included in the surety calculations. Please include mob-demob and a cost per foot for plugging.	lah pbb	

R647-4-109 - Impact Assessment

109.1 - Impacts to surface & groundwater systems

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
39		The operator has provided a watershed map and some information regarding stormwater. The stability of the berm surrounding the pregnant pond and facilities areas is vulnerable to flood flows from the 1575-acre drainage. It has been proposed to put rock riprap upstream of the mill site in the drainage. The Division recommends that the operator not do this and use rock riprap more as an angled diversion to divert flows to the north side of the channel away from the berm surrounding the site. Since it has not been mentioned what size rock will be used, the Division can not state if it will be stable. Putting rock riprap on plastic liner as mentioned (Map SWMP-2 from the storm water management plan) would not generally be considered a prudent design. A possible solution would be to build up a riprapped diversion berm to divert flows to the north side of the channel and not allow it to undercut the raised berm on the northwest corner of the site. The operator is responsible to submit documentation that a stormwater event will not impact surface or groundwater and demonstrate that the engineering design follows industry standards.	TM	

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
40	Page 16	As they become available, please include permits from other agencies in an appendix in the plan.	lah	

109.4 - Slope stability, erosion control, air quality, safety

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
41	Page 16	No response is needed to this comment at this time other than including a place holder in the plan. All contractors working within the permit area need to comply with the DOGM permit. Please supply the contractors with the terms and specifications that will be required by contract. As applicable, please submit the contractors' Air Quality Approval Orders before they begin operations.	lah	

109.5 - Actions to mitigate any impacts

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
42	NOTE to omission	The two previous reviews have both asked that a placeholder be included for other agencies' letters, approvals, and permits, including all that apply, such as DEQ, SHPO, or any county requirements. Please include this placeholder or appendix.	lah	
43		A letter from the Utah State Historic Preservation Officer (SHPO) dated April 6, 2010, recommends, " that a cultural resources contractor be hired to determine potential effect to sites with this undertaking. Much of the area outlined has been surveyed and a number of sites located." Most of the site is on property managed by the Bureau of Land Management which should have access to further information about the sites referred to in the SHPO letter. (No response needed.)	lah	

R647-4-110 - Reclamation Plan

110.2 - Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
44	Page 17 Para 2	Paragraph 2 is written with several uncertainties, as written surety calculation will have to include maximum amount to cover uncertainties.	lah	
45	Page 16, 17, 18	The Division recommends that these three pages be rewritten, in the chronological order of process engineering.	lah	

110.3 - Description of facilities to be left (post mining use)

Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
46	Page 19	Facilities are NOT to be buried on site. Please rewrite.	lah	

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Comm ent #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
47		It is not clear why much of Appendix 5 was included as no reference was included in the text. Include in text the results of the Acid Potential Tests. One sample is a very small data set. What was done to ensure the one sample will be representative of all material to be placed on the leach pad?	lah	

110.5 - Revegetation planting program

Commen t#	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
48		Consider using 2 ton/acre of alfalfa hay as a soil amendment for the clay pit area. Soils in this area are very low in organic matter and the addition of the alfalfa hay would improve this significantly, as well as improve water infiltration.	LK	

<u>R647-4-112 - Variance</u> (List all variances requested and make a finding if approving.)

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
49		No variances are listed no further action is needed.	lah	

R647-4-113 - Surety

Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
50	Appendix 8	There are several comments listed above on different surety items that are not included in the surety sheet. Due to the complexities of this operation the Division suggests that the new DOGM surety sheet be utilized, as you will have to migrate to the form in the future.	lah	
51	Appendix 8	The Division does not use the location factor. The weighted average includes many items that are not associated with demolition and earthwork. The contractor equipment (0154433) and site & infrastructure, demolition (0241, 31-34) which represent reclamation work are all within a few percentage points of the national average.	whw	
52	Appendix 8		whw	
53	Appendix 8		whw	
54	Appendix 8	Generator: please include dimension for the equipment and the haul distance. Also, calculate the transportation costs with a specific type of truck/trailer listed in Means and a driver.	whw	
55	Appendix 8	Pumps and water distribution: please include dimensions for the equipment and the haul distance. Also, calculate the transportation costs with a specific type of truck/trailer listed in Means and a driver.	whw	
56	Appendix 8	Asphalt demolition: please include disposal costs.	whw	
57	Appendix 8	Propane tanks: please include the cost for the truck and driver to ship the tanks to a disposal facility plus disposal costs.	whw	

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Comment #	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
58	Appendix 8	New mill: please include disposal costs for the buildings.	whw	
59	Appendix 8		whw	
60	Appendix 8	Old mill: please include disposal costs for building debris.	whw	
61	Appendix 8	Ore crusher: please include dimension for the equipment and the haul distance. Also, calculate the transportation costs with a specific type of truck/trailer listed in Means and a driver.	whw	
62	Appendix 8	Heap leach reclamation can be calculated from worksheets generated by the State of Nevada see http://www.nvbond.org/index.htm .	whw	
63	Appendix 8	The Division usually uses a standard revegetation cost of \$1,000 per acre. The Means costs are for landscaping projects that are significantly different than reclaiming a mine site.	whw	
64	Appendix 8	Please include the cost to reclaim the monitoring wells.	whw	
65	Appendix 8		whw	
66	Appendix 8	Please include an earthwork table that shows the amount of material that has to be moved, where it is located, where it will be moved and haul distances.	whw	
67	Appendix 8	Please include the cost to remove barrels that contain cyanide.	whw	
68		Please include a table that includes all existing and proposed structures and a map that shows the location of each structure during operations.	whw	
69	Appendix 8	Include clay pit information separately, as release will probably be separate.	lah	

Other comments

Comm ent#	Sheet/Page/ Map/Table #	Comments	Initials	Review Action
70	Appendix 4	Collection time and received time is 20 minutes. Check lab reports for accuracy.	lah	
71	Appendix 10	As per DWQ condition #2 in their January 28, 2010, letter—The facilities are not to be placed in service until DWQ has approved the construction of the facility. A copy of the approval from DWQ needs to be submitted to DOGM and should be placed in Appendix 10 prior to operation (minimum 5 day). At this time submit a placeholder for the plan.	lah	
72	Appendix 10	Include groundwater monitoring and reporting plan required by the BLM and DEQ.	lah	